

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method of Edge-Node Interleave Sort for Leaching and Envelop (ENISLE), comprising:

mapping a circuit into a $V-E$ plain to transform a circuit information into said $V-E$ plain which contains the information of node and edge information, Wherein said V indicates nodes that represent components of said circuit and wherein said E indicates edges that represents the nets of said circuits;

determining whether $V-E$ pairs distribution on said $V-E$ plain is uniformly or not, if said $V-E$ pairs distribution approaching to non-uniformly distribution, then randomizing said $V-E$ pairs on said $V-E$ plain, otherwise performing following steps for sequentially arranging allocations of the $V-E$ pairs according to the magnitude of each said node or said edge, thereby obtaining min-cut or/and ratio min-cut partitioning;

performing a first sorting step from an edge view based on a first side of said $V-E$ plain;

performing a second sorting step from an node view based on a second side of said $V-E$ plain;

performing a third sorting from said edge view based on a third side of said $V-E$ plain; and

performing a fourth sorting step from said node view based on a fourth side of said $V-E$ plain.

2.The method of claim 1, wherein said first side refers to a bottom side of said $V-E$ plain.

3.The method of claim 1, wherein said second side refers to a right side of said $V-E$ plain.

4.The method of claim 1, wherein said first side refers to a top side of said $V-E$ plain.

5.The method of claim 1, wherein said first side refers to a left side of

said *V-E* plain.

6.The method of claim 1, further comprising following steps after performing said fourth sorting:

initializing node set record ;

performing a fifth sorting step from said node view based on the second side;

performing a sixth sorting step from said edge view based on said first side/third side;

determining whether said node set is still interchanged or not? If said node set is no longer interchange then go back to perform said fifth sorting step, otherwise, performing a seventh sorting step from said node view based on said fourth side;

determining whether said node set still interchange or not? If said node set is still interchange, then performing said fifth sorting step for achieving an optimal min-cut or ratio min-cut partitioning.

7.The method of claim 6, wherein said first side refers to a bottom side of said *V-E* plain.

8.The method of claim 6, wherein said second side refers to a right side of said *V-E* plain.

9.The method of claim 6, wherein said first side refers to a top side of said *V-E* plain.

10.The method of claim 6, wherein said first side refers to a left side of said *V-E* plain.

11.A method for min-cut and/or ratio min-cut partitioning, comprising:

mapping a circuit into a *V-E* plain to transform a circuit information into said *V-E* plain which contains the information of node and edge information, Wherein said V indicates nodes that represent components of said circuit and wherein said E indicates edges that represents the nets of said circuits;

performing following steps for sequentially arranging allocations of the $V-E$ pairs according to the magnitude of each said node or said edge, thereby obtaining min-cut or/and ratio min-cut partitioning;

performing a first sorting step from an edge view based on a first side of said $V-E$ plain;

performing a second sorting step from an node view based on a second side of said $V-E$ plain;

performing a third sorting from said edge view based on a third side of said $V-E$ plain; and

performing a fourth sorting step from said node view based on a fourth side of said $V-E$ plain.

12.The method of claim 11, further comprising determining whether said $V-E$ pairs distribution on said $V-E$ plain is uniformly or not, if said $V-E$ pairs distribution approaching to non-uniformly distribution, then randomizing said $V-E$ pairs on said $V-E$ plain.

13.The method of claim 11, wherein said first side refers to a bottom side of said $V-E$ plain.

14.The method of claim 11, wherein said second side refers to a right side of said $V-E$ plain.

15.The method of claim 11, wherein said first side refers to a top side of said $V-E$ plain.

16.The method of claim 11, wherein said first side refers to a left side of said $V-E$ plain.

17. A method for min-cut and/or ratio min-cut partitioning, comprising:
mapping a circuit into a $V-E$ plain to transform a circuit information into said $V-E$ plain which contains the information of node and edge information, Wherein said V indicates nodes that represent components of said circuit and wherein said E indicates edges that represents the nets of said circuits;

determining whether $V-E$ pairs distribution on said $V-E$ plain is uniformly or not, if said $V-E$ pairs distribution approaching to non-uniformly distribution, then randomizing said $V-E$ pairs on said $V-E$ plain, otherwise performing following steps for sequentially arranging allocations of the $V-E$ pairs according to the magnitude of each said node or said edge, thereby obtaining min-cut or/and ratio min-cut partitioning;

performing a first sorting step from an edge view based on a first side of said $V-E$ plain;

performing a second sorting step from an node view based on a second side of said $V-E$ plain;

performing a third sorting from said edge view based on a third side of said $V-E$ plain;

performing a fourth sorting step from said node view based on a fourth side of said $V-E$ plain;

initializing node set record ;

performing a fifth sorting step from said node view based on the second side;

performing a sixth sorting step from said edge view based on said first side/third side;

determining whether said node set is still interchanged or not? If said node set is no longer interchange then go back to perform said fifth sorting step, otherwise, performing a seventh sorting step from said node view based on said fourth side;

determining whether said node set still interchange or not? If said node set is still interchange, then performing said fifth sorting step for achieving an optimal min-cut or ratio min-cut partitioning.

18. A method for display data compression techniques by different light intensity and/or different patterns on a monochrome viewpoint, comprising :

displaying (V, E) pairs on an initial V-E plain shown on a monitor screen to observe the said initial (V, E) pairs distributed condition, wherein said V indicates nodes that represent components of said circuit and wherein said E indicates edges that represents the nets of said circuits;

setting L nodes \times W edges (V, E) pairs rectangle region to compose a block, wherein said L and W are integers;

defining the more (V, E) pairs in said block to be displayed by the relatively high light intensity to the less (V, E) pairs in said block; and

watching relatively large size of V-E plain or a whole V-E plain to said initial (V, E) plain on said monitor screen, wherein said exact (V, E) pairs positions still be held, thereby zooming in said V-E plain to watch detail local (V, E) pairs distributed condition, or zooming out to watch global (V, E) pairs distributed condition on said monitor screen.

19. A method for display data compression techniques by different light intensity and/or different patterns on a monochrome viewpoint, comprising :

displaying (V, E) pairs on an initial V-E plain shown on a monitor screen to observe the said initial (V, E) pairs distributed condition, wherein said V indicates nodes that represent components of said circuit and wherein said E indicates edges that represents the nets of said circuits;

setting L nodes \times W edges (V, E) pairs rectangle region to compose a block, wherein said L and W are integers;

defining the less (V, E) pairs in said block to be displayed by the relatively high light intensity to the more (V, E) pairs in said block; and

watching relatively large size of V-E plain or a whole V-E plain to said initial (V, E) plain on said monitor screen, wherein said exact (V, E) pairs positions still be held, thereby zooming in said V-E plain to watch detail local (V, E) pairs distributed condition, or zooming out to watch global (V, E) pairs distributed condition on said monitor screen.

20. A method for display data compression techniques by different color and/or different patterns on a monochrome viewpoint, comprising :

displaying (V, E) pairs on an initial V-E plain shown on a monitor screen to observe the said initial (V, E) pairs distributed condition, wherein said V indicates nodes that represent components of said circuit and wherein said E indicates edges that represents the nets of said circuits;

setting L nodes \times W edges (V, E) pairs rectangle region to compose a block, wherein said L and W are integers;

defining the more (V, E) pairs in said block to be displayed by the relatively bright color to the less (V, E) pairs in said block; and

watching relatively large size of V-E plain or a whole V-E plain to said initial (V, E) plain on said monitor screen., wherein said exact (V, E) pairs positions still be held, thereby zooming in said V-E plain to watch detail local (V, E) pairs distributed condition, or zooming out to watch global (V, E) pairs distributed condition on said monitor screen.

21. A method for display data compression techniques by different color and/or different patterns on a monochrome viewpoint, comprising :

displaying (V, E) pairs on an initial V-E plain shown on a monitor screen to observe the said initial (V, E) pairs distributed condition, wherein said V indicates nodes that represent components of said circuit and wherein said E indicates edges that represents the nets of said circuits;

setting L nodes \times W edges (V, E) pairs rectangle region to compose a block, wherein said L and W are integers;

defining the more (V, E) pairs in said block to be displayed by the relatively bright color to the less (V, E) pairs in said block; and

watching relatively large size of V-E plain or a whole V-E plain to said initial (V, E) plain on said monitor screen, wherein said exact (V, E) pairs positions still be held, thereby zooming in said V-E plain to watch detail local (V, E) pairs distributed condition, or zooming out to watch global (V, E) pairs distributed condition on said monitor screen.